

### **REMARKS**

The Office Action of September 17, 2008 has been fully considered. In view of the above amendments and the following remarks, reconsideration of the application is respectfully requested.

Applicants submit the amendments do not raise new issues for consideration.

### **Status of Claims**

Claims 1-7 are allowed.

Claims 9-15 have been canceled without prejudice and disclaimer.

Claim 8 has been amended.

Claims 16-19 are newly added.

### **The Office Action**

The allowance of claims 1-7 is noted and appreciated.

Claims 8-15 stand rejected under 35 U.S.C. §102(b) as being anticipated by or, in the alternative, under 35 U.S.C. §103(a) as being obvious over Sugishima et al. (JP 08-257402).

Amended claim 8 recites a catalyst for removing nitrogen oxides which comprises particles of titanium dioxide, tungsten trioxide and cerium dioxide supported on a catalyst carrier, and wherein particles of titanium dioxide are oriented and cohered while holding particles of tungsten trioxide in between the titanium dioxide particles to form micro voids, and wherein particles of cerium dioxide are coexisted with the tungsten trioxide in the gaps between the titanium dioxide particles.

New claim 16 recites the catalyst of claim 8, wherein silica is further contained in the catalyst.

New claim 17 recites the catalyst of claim 8 wherein the catalyst carrier may include an inorganic fiber catalyst carrier, a ceramic catalyst carrier, and a metal catalyst carrier.

New claim 18 recites the catalyst of claim 17 wherein the inorganic fiber catalyst carrier is a corrugated honeycomb carrier prepared by subjecting a sheet of silica-alumina type inorganic fibers to a corrugating process.

New claim 19 recites the catalyst of claim 17 wherein the metal catalyst carrier is a metal lath.

Such a catalyst is not shown nor suggested by Sugishima.

There is no teaching or suggestion how a catalyst for removing nitrogen oxides could be achieved wherein particles of titanium dioxide are oriented and cohered while holding particles of tungsten trioxide in between the titanium dioxide particles to form micro voids and wherein particles of cerium dioxide are coexisted with the tungsten trioxide in the gaps between the titanium dioxide. The burden is on the Patent and Trademark Office to establish a prima facie case of obviousness. In re Rijckaert, 9 F.3d 1531, 1532 (Fed. Cir. 1993) In so doing, the Examiner is required to make a factual determination as set forth in Graham v. John Deere Co., 383 U.S. 1 (1966), and to provide a reason why one of ordinary skill in the art would have been led to modify the prior art to arrive at the claimed invention. While the "teaching, suggestion, or motivation: test (TSM test) has been found too rigid to be universally applied, there must nevertheless be "an apparent reason to combine the known elements in the fashion claimed by the patent at issue." KSR Intern. Co. v. Teleflex, Inc., 127 S.Ct. 1727, 1740-41 (U.S. 2007).

Sugishima discloses a catalyst for removing nitrogen oxides which is characterized in that an aqueous medium solution containing a soluble titanium compound, a soluble tungsten compound and a soluble cerium compound is made to be precipitated to obtain a precipitate, the precipitate being then calcinated to obtain catalyst components (claim 1).

Applicants maintain that the rejection is improper because Sugishima teaches away from the claimed invention. A reference which leads one of ordinary skill in the art away from the claimed invention cannot render it obvious under 35 U.S.C. § 103. Dow Chemical Company v. American Cyanamid Company, 816 F.2d 617 (Fed. Cir. 1987).

According to Sugishima, the catalyst prepared by co-precipitating by soluble compounds of titanium, tungsten, and cerium followed by calcination, has a structure with particles of  $\text{CeO}_2$  and  $\text{WO}_3$  highly dispersed in  $\text{TiO}_2$  particles. The  $\text{CeO}_2$  may be penetrated into the interior of  $\text{TiO}_2$  particles. Therefore, the  $\text{CeO}_2$  would not work as an active component of the catalyst as in the present invention. (Specification of Kato,

page 6, lines 5-12) Thus, Sugishima teaches away from a catalyst for removing nitrogen oxides wherein particles of titanium dioxide are oriented and cohered while holding particles of tungsten trioxide in between the titanium dioxide particles to form micro voids and wherein particles of cerium dioxide are coexisted with the tungsten trioxide in the gaps between the titanium dioxide.

### CONCLUSION

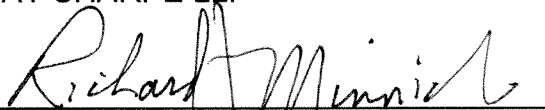
For the reasons detailed above, it is respectfully submitted all claims remaining in the application amended claims 1-8, and 16-19 are now in condition for allowance. No further search or examination is believed to be required.

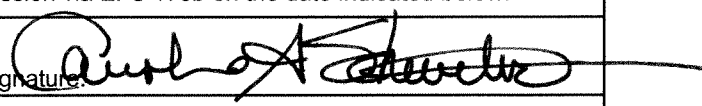
If the Examiner considers personal contact advantageous to the disposition of this case, he is hereby authorized to call Richard J. Minnich, at telephone number 216-861-5582, Cleveland, OH.

Respectfully submitted,

FAY SHARPE LLP

Dec. 9, 2008  
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